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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,533	01/28/2002	Simon J. Prosser	200701/1111	3700

7590

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EXAMINER

NAGPAUL, JYOTI

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/058,533

Applicant(s)

PROSSER ET AL.

Examiner

Jyoti Nagpaul

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9-11, 15-17 and 25-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-11, 15-17 and 25-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1743

DETAILED ACTION

Amendment filed on February 17, 2006 has been acknowledged. Claims 1-7, 9-11, 15-17, 25-38 are pending.

Response to Amendment

Rejection of Claims 1-7, 9-11, 15-17 and 25-38 as being unpatentable over Moon in view of Roach has been modified in light of applicant's amendments.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

Art Unit: 1743

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. **Claims 1-7,9-12,15-17 and 25-35** are rejected under 35 U.S.C. 103(a) as being unpatentable over Moon in view of Roach.

Moon discloses an electrospray device. The device comprises a housing (108), a chip holder (112) mounted to the housing (108), an electrospray chip (320) having a plurality of nozzles (334) mounted to the chip holder (112). (See Figures 4 and 23A) Moon further discloses many ways of introducing the sample to the electrospray chip by a syringe pump, micropipette, capillary, or a nozzle (52/521). The probe (52/521) may further be a chromatographic column. (See abstract) Moon further teaches the fluid delivery probe (52/521) is in fluid communication with a pressure source. Moon teaches, "The liquid sample was pumped using a syringe pump at a flow of 333 nL/min through the pipette tip pressed-sealed against the injection side of the electrospray device." (See [0139]) The device further includes a first voltage applied to the electrospray chip and a second voltage applied to the fluid sample contained in the delivery probe/nozzle (52/521) wherein the first and second voltages and fluid pressure are controlled to provide a fluid flow rate and simultaneous voltage to form an electrospray of the fluid sample from the electrospray chip. (See Figures 1, 8, 24C and 24D) According to Figure. 24D, the system further comprises an alignment system that aligns the fluid delivery probe (52) with the electrospray chip (100) and the electrospray chip (100) with a detector/mass spectrometer (60). (See Figure 24D) The fluid delivery

Art Unit: 1743

probe (300) further comprises a seal/epoxy bonding that prevents leakage between the probe and the electrospray device during delivery of the fluid to the electrospray chip.

Moon recites, "a fluid delivery device is attached by any suitable method, such as by epoxy bonding, to the electrospray device to form a continuous sealed flow path between the upstream fluid source and the channel of the electrospray device." (See [0128]) The device further comprises of a plurality of electrospray devices, each generating one or a multiple electrospray plumes when activated. Moon recites, "a chip-based combinatorial chemistry system 320 comprising a reaction well block or titer plate 322 defines an array of reservoirs 326 for containing the reaction products from a combinatorially compound." (See [0134])

With respect to Claims 1-2 and 35, Moon fails to disclose a probe carriage mounted to the housing and moveable between a sample source and the electrospray chip and the fluid delivery probe moveable within the probe carriage that accepts sample from the sample source and discharges sample to the electrospray chip. The fluid delivery is electrically insulated from the probe carriage. Moon also fails to disclose the fluid delivery probe loads a disposable pipette tip onto the fluid delivery probe.

With respect to claims 25-27 and 30, Moon fails to disclose an array of sample loading devices comprises an array of pipette, syringe tips or capillary tubes and where the sample loading device is preloaded with sample.

With respect to claims 37 and 38, Moon fails to specifically disclose the pressure source a pressure to the fluid of less than 5 psi and is regulated to provide a flow rate of up to about 2 microliters per minute.

Roach discloses an automated apparatus for the analysis of biological specimens. The apparatus includes a probe carriage (35) mounted to a housing and moveable between a sample source and the electrospray chip and the fluid delivery probe moveable within the probe carriage that accepts sample from the sample source and discharges to the electrospray chip. Roach teaches, "the multifunctional device (35) can also be adapted to access a reservoir for bulk pipetting of solutions. A piezoelectric delivery apparatus could also be added...." (See [0059]) The apparatus further includes a pipette tray/sample loading device. Roach teaches, "the multifunctional device (35), carrying the pipettor array, is movable to the vicinity of the second track (30) where the microtiter plates (25) and (26) reside, as well as fresh pipettor tips in racks (34) and (36)." (See [0055]) Moon further teaches a fluid delivery probe (112) loads a first disposable pipette tip (102) onto the fluid delivery probe and wherein after the sample is sprayed the fluid delivery probe (112) is further moveable within the probe carriage (53) to unload the first disposable pipette tip (112) and load a second disposable pipette tip (25) onto the fluid delivery probe, accept sample from the sample source into the second disposable pipette tip (25).

It would have been obvious to one of the ordinary skill in this art at the time the invention to provide a probe carriage mounted on the housing moveable between a sample source and the electrospray chip and the fluid delivery probe moveable within the probe carriage that accepts sample from the sample source and discharges sample to the electrospray chip and fluid delivery is electrically insulated from the probe carriage in order to achieve efficient and precise filling of the electrospray device, avoid

cross-contamination between sample analysis and increase the analysis of each specimen thus achieving an increase in high throughput analysis.

It would have been obvious to one of the ordinary skill in this art at the time the invention to provide a disposable pipette tip onto the fluid delivery probe in order eliminate the risks of sample cross-contamination.

With respect to claims 33-34 and 37-38, Moon fails to disclose the chip holder is positionable within less than 10 microns and the fluid delivery probe is aligned to a fixed position accurately to within less than 40 microns. Moon also fails to specifically disclose the pressure source a pressure to the fluid of less than 5 psi and is regulated to provide a flow rate of up to about 2 microliters per minute. It would have been obvious to one of the ordinary skill in the art to determine through routine experimentation, the optimum positions and pressure for the elements of the apparatus in order to provide the best results and analysis.

Response to Arguments

Applicant's arguments with respect to claims 1-7, 9-11, 15-17 and 25-38 have been considered but are moot in view of the new ground(s) of rejection. Please refer above. Applicants argue that the present application has an effective filing date of January 26, 2001 with precludes Moon from qualifying as prior art under 35 USC § 102 (a). However examiner notes, Moon is being used as prior art under 35 USC 102(e).

Conclusion

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 1743

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jyoti Nagpaul whose telephone number is 571-272-1273. The examiner can normally be reached on Monday thru Friday (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1743

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JN


Jill Warden
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